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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/635,561	08/10/2000	Shinsuke Yokokawa	Q60393	6018

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EXAMINER

PHAM, THOMAS K

ART UNIT PAPER NUMBER

2121

DATE MAILED: 03/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/635,561

Applicant(s)

YOKOKAWA, SHINSUKE

Examiner

Thomas K Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Notice to Applicant(s)

1. Claims 1-3 of U.S. Application 09/635561 filed on 08/10/2000 are presented for examination.
2. Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

DETAILED ACTION

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta et al. U.S. Patent 5,996,083 (hereinafter Gupta) in view of Watts, Jr. et al. U.S. Patent No. 6,173,409 (hereinafter Watts).
5. As for claim 1, Gupta shows a programmable controller for controlling a controlled apparatus by pulse output, comprising: a pulse generating section for outputting a pulse string having a set cycle, a pulse dividing section for dividing the pulse string output from said pulse generating section at a predetermined dividing ratio and for outputting an interruption request signal having a cycle which is n times as great as the cycle of the pulse string, where n is a positive integer (e.g. col. 6 lines 29-59 of Gupta); Gupta does not specifically show a central processing unit for executing an interruption processing in response to the interruption request

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signal output from said pulse dividing section so as to control the output of said pulse generating section. Watts shows a central processing unit for executing an interruption processing in response to the interruption request signal output from said pulse dividing section so as to control the output of said pulse generating section (col. 12 lines 13-32). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Watts interrupt request signal with Gupta programmable controller because it would provide for saving power during system idle and at the same time extend the life of the CPU or CPUs.

6. As for claim 2, it is rejected applied above as in rejecting claim 1. Furthermore, Gupta shows a programmable controller wherein said central processing unit sets a dividing ratio to be used for division of the pulse dividing section, controls the number of pulses output from said pulse generating section (e.g. col. 7 lines 20-38 of Gupta). However, Gupta does not expressly show a programmable controller wherein said central processing unit sets the dividing ratio to be equal to the number of pulses which have not been output when the number of the pulses which are output is smaller than $2n$. Gupta shows available software programs can be use to set the dividing ratio values (e.g. col. 5 lines 60-64 of Gupta) to integer ratios (e.g. col. 6 lines 50-59 of Gupta) and could be adjust by software programs according to the designer (e.g. col. 7 lines 26-38 of Gupta). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide a software program that sets the dividing ratio equal to the number of pulses which have not been output when the number of the pulses which are output is smaller than $2n$, in order to conserve power during high-speed processing of a CPU.

7. As for claim 3, Gupta shows a programmable controller wherein said central processing unit changes the dividing ratio to be used for the division of said pulse dividing section

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depending on the cycle of the pulse string output from said pulse generating section (e.g. col. 7 lines 20-38 of Gupta).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Thomas Pham; whose telephone number is (703) 305-7587 and fax number is (703) 746-8874. The examiner can normally be reached on Monday-Friday from 7:30AM- 4:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *John Follansbee*, can be reached on (703) 305-8498 or via e-mail addressed to [*joh.follansbee@uspto.gov*]. The fax number for this Group is (703) 308-5403.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [**thomas.pham@uspto.gov**].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Thomas K. Pham
Patent Examiner

tp
March 12, 2003

Ramesh Patel
RAMESH PATEL 3/12/03
PRIMARY EXAMINER
For John Follansbee